

SEQUENCE LISTING

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Cheo, David

<120> Compositions and Methods for Use in
Recombinational Cloning of Nucleic Acids

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SubFD
<130> 0942.4680003

<140> 09/517,466

<141> 2000-03-02

<150> US 60/122,389

<151> 1999-03-02

<150> US 60/126,049

<151> 1999-03-23

<150> US 60/136,744

<151> 1999-05-28

<160> 285

<170> PatentIn version 3.1

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ttttacgttt ctcgttcagc tttttgtac aaagttggca ttataaaaaaa gcattgctca 180
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<222> (895)..(1704)

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<222> (1809)..(2382)

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Ile Arg Tyr Arg Ile	
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<400> 188

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1 5 10 15

48

ccg gta ccg aat tc
Pro Val Pro Asn
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62

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<210> 191
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48

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Ile Arg Tyr Arg Ile
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48

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49

g

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<210> 199

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1 5 10 15
atc cgg tac cga att cgc 66
Ile Arg Tyr Arg Ile
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1 5 10 15
1 63
cgg tac cga att cgc
Arg Tyr Arg Ile
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1 5 10 15

tca tgc atc gtc gac tgg atc cg^g tac cga att cg^c 84
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1 5 10 15

gac cta gtc gac tgg atc cggt tac cga att cgc
Asp Leu Val Asp Trp Ile Arg Tyr Arg Ile 81
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1 5 10 15
Asp Leu Val Asp Trp Ile Arg Tyr Arg Ile
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1 5 10 15

aga tct gtc gac tgg atc cgg tac cga att cgc 81
Arg Ser Val Asp Trp Ile Arg Tyr Arg Ile
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5 10 15
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acc aat tca gtc gac tgg atc cgg tac cga att cgcc 84
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Leu Tyr Lys Lys Ala Gly Phe Glu Gly Asp Arg Thr Asn Ser Leu Arg
1 5 10 15

aaa tac tta acc atg gtc gac tgg atc cggt tac cga att c 88
Lys Tyr Leu Thr Met Val Asp Trp Ile Arg Tyr Arg Ile
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g 50

<210> 221
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<210> 222
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<210> 223

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<212> DNA

<213> Artificial Sequence

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<223> pDEST2

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<221> CDS

<222> (94)..(135)

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gagcggataa caatttcaca caggaaacag acc atg tcg tac tac cat cac cat 114
Met Ser Tyr Tyr His His His
1 5
cac cat cac ggc atc aca agt ttgtacaaaa aagctgaa 153
His His His Gly Ile Thr Ser
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<400> 224

Met Ser Tyr Tyr His His His His His His Gly Ile Thr Ser
1 5 10

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Met Ser Pro Ile
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cta ggttatttggaa aaattaaggg ccttgtgcaa ccc 153
Leu
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Met Ser Pro Ile Leu
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<210> 229
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Met Gly His His His His	
1 5	
cat cac gat tac gat atc cca acg acc gaa aac ctg tat ttt cag ggc	162
His His Asp Tyr Asp Ile Pro Thr Thr Glu Asn Leu Tyr Phe Gln Gly	
10 15 20	
gcc cat atg agc gat aaa att att cac ctg act gac gac agt gat gac	210
Ala His Met Ser Asp Lys Ile Ile His Leu Thr Asp Asp Ser Asp Asp	
25 30 35	
gat gac aag gta ccc atc aca agt ttg tac aaa aaa gctgaacga	255
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<223> pDEST6

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agcggccgccc gactagtgtat cacaagttt tacaaaaaaag ctgaacgaga aacgtaaaat 180
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cgggaaattcc ggaccggtagt acgcaggcgt accagcttc cctatagtga gtcgtattag 120
agcttggcgt aatcatggtc atagctgttt cctgtgtgaa attgttatcc gctcacaatt 180
ccacacaaca tacgagccgg aagcataaaag tgtaaaggcct ggggtgccta atgagtgagc 240
taactcacat taatt 255

<210> 235

<211> 306

<212> DNA

<213> Artificial Sequence

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<223> pDEST7

<400> 235
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tttgtgaacc gtcagatcgc ctggagacgc catccacgct gtttgaccc ccatagaaga 120

-300-

caccgggacc gatccagcct ccggactcta gcctaggccg cggagcggat aacaattca 180
cacaggaaac agctatgacc actaggctt tgcaaaaagc tathtagtg acactataga 240
aggtacgcct gcaggtaccg gtccggaatt cccatcacaa gtttgtacaa aaaagctgaa 300
cgagaa 306

<210> 236

<211> 204

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST8

<400> 236
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taaataagta tttaactgtt ttcgtaacag ttttgtaata aaaaaaccta taaatattcc 120
ggattattca taccgtccc ccatcggcg cgatcatca caagttgt aaaaaagct 180
gaacgagaaa cgtaaaatga tata 204

<210> 237

<211> 153

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST9

<400> 237
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ggccttagat tggcgtta atacacagaa ttctgattgg atcccggtcc gaagcgcgt 120
ttccccatcaa caagttgt aaaaaagct gaa 153

<210> 238

<211> 204

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST10

<220>

<221> CDS

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<223>

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gattattcat accgtcccac catcgggcgc ggatctcggt ccgaaacc atg tcg tac	117
Met Ser Tyr	
1	
tac cat cac cat cac cat cac gat tac gat atc cca acg acc gaa aac	165
Tyr His His His His His Asp Tyr Asp Ile Pro Thr Thr Glu Asn	
5 10 15	
ctg tat ttt cag ggc atc aca agt ttg tac aaa aaa gct	204
Leu Tyr Phe Gln Gly Ile Thr Ser Leu Tyr Lys Lys	
20 25 30	

<210> 239

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> pDEST10

<400> 239

Met Ser Tyr Tyr His His His His His Asp Tyr Asp Ile Pro Thr	
1 5 10 15	
Thr Glu Asn Leu Tyr Phe Gln Gly Ile Thr Ser Leu Tyr Lys Lys	
20 25 30	

<210> 240

<211> 204

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST11

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accgggaccg atccagcctc cgcggccccc aattcgagct cggtaccgg ggatcctcta 120
gagtgcgaggc cgacggtatc gataagcttg atatcaacaa gtttgtacaa aaaagctgaa 180
cgagaaacgt aaaatgatataa 204

<210> 241

<211> 255

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST12.2

<400> 241
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accgatccag cctccggact ctagcctagg ccgcggagcg gataacaatt tcacacagga 120
aacagctatg accatttaggc ctttgaaaaa agtatttag gtgacactat agaaggtagc 180
cctgcaggta ccggtccgga attcccatca acaagttgt acaaaaaagc tgaacgagaa 240
acgtaaaatg atata 255

<210> 242

<211> 300

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST13

<400> 242
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taaattcata taaaaaacat acagataacc atctgcggtg ataaattatc tctggcggtg 120

ttgacataaa taccactggc ggtgatactg agcacatcg caggacgcac tgaccaccat	180
gaaggtgacg ctcttaaaaa ttaagccctg aagaaggca gcattcaaag cagaaggctt	240
tgggtgtgt gatacgaaac gaagcattgg gatcatcaca agtttgtaca aaaaagctga	300

<210> 243

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST14

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actcactata gggagaccac aacggtttcc ctctagatca caagttgtca caaaaaagct	120

<210> 244

<211> 204

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST15

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<221> misc_feature

<222> (1)..(1)

<223> may be any nucleotide

<220>

<221> CDS

<222> (106)..(120)

<223>

<400> 244

natcgagatc tcgatccgc gaaattaata cgactcacta tagggagacc acaacggttt 60
ccctctagaa ataatttgt ttaacttaa gaaggagata tacat atg tcc cct ata 117
Met Ser Pro Ile
1

cta ggattttgga aaattaaggg ctttgcaaa cccactcgac ttcttttggaa 170
Leu
5

atatcttcaa gaaaaatatg aagagcattt gtat 204

<210> 245

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> pDEST15

<220>

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<222> (1)..(1)

<223> may be any nucleotide

<400> 245

Met Ser Pro Ile Leu
1 5

<210> 246

<211> 153

<212> DNA

<213> Artificial Sequence

<220>

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<220>

<221> CDS

<222> (70)..(99)

<223>

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cgtccatgg tcg aat caa aca agt ttg tac aaa aaa gct gaacgagaaa 109
Ser Asn Gln Thr Ser Leu Tyr Lys Lys Ala
1 5 10
cgtaaaatga tataaatatc aatatattaa attagatttt gcat 153

<210> 247

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> pDEST15

<400> 247

Ser Asn Gln Thr Ser Leu Tyr Lys Lys Ala
1 5 10

<210> 248

<211> 153

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST16 multiple cloning site

<220>

<221> CDS

<222> (100)..(111)

<223>

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agaaataatt ttgttaact ttaagaagga gatatacat atg agc gat aaa 111
Met Ser Asp Lys
1

attattcacc tgactgacga cagtttgac acggatgtac tc 153

<210> 249

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> pDEST16 multiple cloning site

<400> 249

Met Ser Asp Lys
1

<210> 250

<211> 153

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST16 multiple cloning site

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<221> CDS

<222> (82)..(123)

<223>

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aacctggccg gttctggttc t ggt gat gac gat gac aag atc aca agt ttg 111
Gly Asp Asp Asp Lys Ile Thr Ser Leu
1 5 10

tac aaa aaa gct gaacgagaaa cgtaaaatga tataaatatc 153
Tyr Lys Lys Ala

<210> 251

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> pDEST16 multiple cloning site

<400> 251

Gly Asp Asp Asp Asp Lys Ile Thr Ser Leu Tyr Lys Lys Ala
1 5 10

<210> 252

<211> 153

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST17 multiple cloning site

<220>

<221> CDS

<222> (94)..(153)

<223>

<400> 252
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60

aattttgttt aactttaaga aggagatata cat atg tcg tac tac cat cac cat
Met Ser Tyr Tyr His His His
1 5

114

cac cat cac ctc gaa tca aca agt ttg tac aaa aaa gct
His His His Leu Glu Ser Thr Ser Leu Tyr Lys Lys Ala
10 15 20

153

<210> 253

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> pDEST17 multiple cloning site

<400> 253

Met Ser Tyr Tyr His His His His His Leu Glu Ser Thr Ser Leu
 1 5 10 15

Tyr Lys Lys Ala
20

<210> 254

<211> 420

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST18 p10 Promoter

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tcctcggtt tctggaaggc gagcatcgtt tgttcgccca ggactctagc tatagttcta 120
gtggttggct acgtatcgag caagaaaata aaacgccaaa cgcgttggag tcttgtgtgc 180
tatTTTaca aagattcaga aatacgcatac acttacaaca agggggacta tgaaattatg 240
catTTTgagg atGCCGGGac cttaattca acccaacaca atatattata gttaaataag 300
aattatttat caaatcattt gtatattaat taaaatacta tactgtaaaat tacattttat 360
ttacaatqaq gatcatcaca agtttgtaca aaaaagctga acgagaaaacg taaaatgata 420
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<210> 255

<211> 300

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST19 39K Promoter

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aaaaaaaaaccgg ccagtttctt ccacaaaactc gcgcacggct gtctcgtaaa cttttgcgtc 120

gcaacaatcg	cgtacgacctc	gtggtatgga	aatttttct	aaaaaaagtgt	cgttcatgtc	180
ggcggcggcg	ttcgcgcgtcc	ggtacgcgcg	acgggcacac	agcaggacag	ccttgtccgg	240
ctcgattatc	ataaacaatc	ctgcaggcat	gcaagctgga	tcatcacaag	tttgtacaaa	300

<210> 256

<211> 204

<212> DNA

<213> Artificial Sequence

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<223> pDEST20 Polyhedron Promoter

<220>

<221> CDS

<222> (163)..(174)

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<400> 256	ggctacgtat	actccggaat	attaatagat	catggagata	attaaaatga	taaccatctc	60	
	gcaaataaat	aagtatttta	ctgtttcgt	aacagtttg	taataaaaaaa	acctataaaat	120	
	attccggatt	attcataaccg	tcccaccatc	gggcgcggat	cc atg	gcc cct	ata	174
					Met	Ala	Pro Ile	
					1			
	ctaggttatt	ggaaaattaa	gggccttgtg					204

<210> 257

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> pDEST20 Polyhedron Promoter

<400> 257

Met Ala Pro Ile
1

<210> 258
<211> 95
<212> DNA
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<222> (1)..(48)
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<400> 258
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Ser Asp Leu Val Pro Arg His Asn Gln Thr Ser Leu Tyr Lys Lys Ala
1 5 10 15
gaacggaaaa cgtaaaatga tataaatatc aatatattaa attagat

<210> 259
<211> 16
<212> PRT
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<220>
<223> pDEST20 Polyhedron Promoter
<400> 259

Ser	Asp	Leu	Val	Pro	Arg	His	Asn	Gln	Thr	Ser	Leu	Tyr	Lys	Lys	Ala
1					5					10					15

<210> 260
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<212> DNA
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<220>
<221> CDS
<222> (163)..(180)
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attgttctcg ttcc^{cc}tttct tccttg^{ttc} ttttctgca caatatttca agctatacca 120
agcataacaat caactccaag cttgaagcaa gcctcctgaa ag atg aag cta ctg 174
Met Lys Leu Leu
1

tct tct atcgaacaag catgcgatat ttgc 204
Ser Ser
5

<210> 261
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> pDEST21 Promoter region
<400> 261
Met Lys Leu Leu Ser Ser
1 5

<210> 262
<211> 102
<212> DNA
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<220>
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<221> CDS

<222> (37) .. (78)

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Val Ser Ser Arg Ser Asn
1 5

caa aca agt ttg tac aaa aaa gct gaacgagaaa cgtaaaatga tata 102
Gln Thr Ser Leu Tyr Lys Lys Ala
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<210> 263

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> pDEST21 Promoter region

<400> 263

Val Ser Ser Arg Ser Asn Gln Thr Ser Leu Tyr Lys Lys Ala
1 5 10

<210> 264

<211> 255

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST22 Promoter region

<220>

<221> CDS

<222> (217) .. (228)

<223>

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aaataaaaaaa agtttgcgc tttgctatca agtataaata gacctgcaat tattaatctt 120
ttgtttcctc gtcattgttc tcgttccctt tcttccttgt ttcttttct gcacaatatt 180
tcaagctata ccaaggatac aatcaactcc aagctt atg ccc aag aag 228
Met Pro Lys Lys
1
aagcggaagg tctcgagcgg cgccaat 255

<210> 265

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> pDEST22 Promoter region

<400> 265

Met Pro Lys Lys
1

<210> 266

<211> 82

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<223> pDEST22

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<400> .266
gaagatacc caccaaacc aaaaaaaaaa gag ggt ggg tcg aat caa aca agt ttg 54
Glu Gly Gly Ser Asn Gln Thr Ser Leu

1

5

82

tac aaa aaa gct gaacgagaaa cgtaaa
Tyr Lys Lys Ala
10

<210> 267

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> pDEST22

<400> 267

Glu Gly Gly Ser Asn Gln Thr Ser Leu Tyr Lys Lys Ala
1 5 10

<210> 268

<211> 102

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST23 T7 promoter

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aagtttgtac aaaaaagctg aacgagaaac gtaaaatgtat at 102

<210> 269

<211> 153

<212> DNA

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<221> CDS

<222> (61)..(126)

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gct ttc ttg tac aaa gtg gtg att atg tcg tac cat cac cat cac 108
Ala Phe Leu Tyr Lys Val Val Ile Met Ser Tyr Tyr His His His
1 5 10 15
cat cac ctc gat gag caa taactagcat aacccttgg ggctct 153
His His Leu Asp Glu Gln
20

<210> 270

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> pDEST23 T7 promoter

<400> 270

Ala Phe Leu Tyr Lys Val Val Ile Met Ser Tyr Tyr His His His
1 5 10 15
His His Leu Asp Glu Gln
20

<210> 271

<211> 102

<212> DNA

<213> Artificial Sequence

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<223> pDEST24 T7 promoter

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cctctagatc acaagttgt acaaaaaagc tgaacgagaa ac 102

<210> 272
<211> 102
<212> DNA
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<221> CDS
<222> (22)..(60)
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Ala Phe Leu Tyr Lys Val Val Ile Met Ser
1 5 10
cct ata cta ggttatttggaa aaatthaaggg ccttgtgcaa cccactcgac tt 102
Pro Ile Leu

<210> 273
<211> 13
<212> PRT
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<220>
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<400> 273
Ala Phe Leu Tyr Lys Val Val Ile Met Ser Pro Ile Leu
1 5 10

<210> 274
<211> 102
<212> DNA
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<223> pDEST25 T7 promoter
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<223> May be any nucleotide

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ctagatcaca agtttgtaca aaaaagctga acgagaaaacg ta 102

<210> 275
<211> 102
<212> DNA
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<221> CDS
<222> (19)..(60)
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<400> 275
ttttacgtt ctcgttca gct ttc ttg tac aaa gtg gtg att atg agc gat 51
Ala Phe Leu Tyr Lys Val Val Ile Met Ser Asp
1 5 10
aaa att att cacctgactg acgacagtt tgacacggat gtactcaaag cg 102
Lys Ile Ile

<210> 276
<211> 14
<212> PRT

<213> Artificial Sequence

<220>

<223> pDEST25 T7 promoter

<400> 276

Ala Phe Leu Tyr Lys Val Val Ile Met Ser Asp Lys Ile Ile
1 5 10

<210> 277

<211> 306

<212> DNA

<213> Artificial Sequence

<220>

<223> pDEST26 CMV promoter

<220>

<221> CDS

<222> (238)..(297)

<223>

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acaactccgc cccattgacg caaatggcg gttaggcgtgt acgggtggag gtcttatataa 120
gcagagctcg ttttagtgaac cgtagatcg cctggagacg ccatccacgc tgtttgacc 180
tccatagaag acaccggac cgatccagcc tccggactct agcctaggcc gcggacc 237
atg gcg tac tac cat cac cat cac tct aga tca aca agt ttg 285
Met Ala Tyr Tyr His His His His His Ser Arg Ser Thr Ser Leu
1 5 10 15
tac aaa aaa gct gaacgagaa 306
Tyr Lys Lys Ala
20

<210> 278

<211> 20

<212> PRT

<213> Artificial Sequence

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<223> pDEST26 CMV promoter

<400> 278

Met Ala Tyr Tyr His His His His His Ser Arg Ser Thr Ser Leu
1 5 10 15

Tyr Lys Lys Ala
20

<210> 279

<211> 255

<212> DNA

<213> Artificial Sequence

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<223> pDEST27 promoter

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<222> (1)..(1)

<223> May be any nucleotide

<220>

<221> CDS

<222> (139)..(153)

<223>

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gccatccacg ctgtttgac ctccatagaa gacaccggga ccgatccagc ctccggactc 120
tagccttaggc cgccggacc atg gcc cct ata cta gtttattgga aaattaaggg 173
Met Ala Pro Ile Leu
1 5
ccttgtgcaa cccactcgac ttctttgga atatcttcaa gaaaaatatg aagagcattt 233

gtatgagcgc gatgaaggta at 255

<210> 280

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<212> PRT

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<221> misc_feature

<222> (1)..(1)

<223> May be any nucleotide

<400> 280

Met Ala Pro Ile Leu
1 5

<210> 281

<211> 87

<212> DNA

<213> Artificial Sequence

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<223> pDEST27 promoter

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<221> CDS

<222> (37)..(75)

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<400> 281
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Val Pro Arg Ser Arg Ser
1 5

aca agt ttg tac aaa aaa gct gaacgagaaa cg 87
Thr Ser Leu Tyr Lys Lys Ala

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<210> 282
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> pDEST27 promoter
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Val Pro Arg Ser Arg Ser Thr Ser Leu Tyr Lys Lys Ala
1 5 10

<210> 283
<211> 405
<212> DNA
<213> Artificial Sequence

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acaatttcac acagggaaaca gctatgacca ttaggcctat ttaggtgaca ctatagaaca 180
agtttgtaca aaaaacgagg ctggtaccgg tccggattc ccggatatac gtcgacgagc 240
tcactagtgc gcggccgctc tagagtatcc ctcgaggggc ccaagcttac gcgtacccag 300
ctttcttgta caaagtggtc cctatagtga gtcgtattat aagctaggca ctggccgtcg 360
ttttacaacg tcgtgactgg gaaaactgct agcttggat ctttg 405

<210> 284
<211> 153
<212> DNA
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<220>
<223> His6-CAT

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<222> (31)..(153)
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<400> 284
cggtataacaa tttcacacag gaaacagacc atg tcg tac tac cat cac cat cac 54
Met Ser Tyr Tyr His His His His His
1 5

cat cac ggc atc aca agt ttg tac aaa aaa gca ggc ttt gaa aac ctg 102
His His Gly Ile Thr Ser Leu Tyr Lys Lys Ala Gly Phe Glu Asn Leu
10 15 20

tat ttt caa gga acc atg gag aaa aaa atc act gga tat acc acc gtt 150
Tyr Phe Gln Gly Thr Met Glu Lys Lys Ile Thr Gly Tyr Thr Thr Val
25 30 35 40

gat 153
Asp

<210> 285
<211> 41
<212> PRT
<213> Artificial Sequence

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<400> 285
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1 5 10 15

Lys Lys Ala Gly Phe Glu Asn Leu Tyr Phe Gln Gly Thr Met Glu Lys 20 25 30

Lys Ile Thr Gly Tyr Thr Thr Val Asp 35 40

Sub
El